

### Notice of Allowability

**Application No.**

09/982,192

**Examiner**

Irakli Kiknadze

**Applicant(s)**

DOBBS, JOHN M.

**Art Unit**

2882

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/15/2003.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 18 October 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 6 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____.            |
| 3 <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No. _____  | 7 <input type="checkbox"/> Examiner's Amendment/Comment                             |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|  | 9 <input type="checkbox"/> Other  |

### **DETAILED ACTION**

1. In response to the office action of June 9, 2003 the Amendment has been received on October 15, 2003.

Claims 14,15 and 18 have been amended.

Claims 1-20 are currently pending in the application.

### ***Response to Arguments***

2. Applicant's arguments, see pages 8-12, filed October 15, 2003, with respect to claims 12, 16 and 18 have been fully considered and are persuasive. The rejection of claims 12,16 and 18 has been withdrawn.

### ***Allowable Subject Matter***

3. Claims 1-20 are allowed.

4. The following is an examiner's statement of reasons for allowance:

Claims 1-10 are allowed because prior art fails to disclose or make obvious a method of stabilizing the calculation of CT numbers by a CT system comprising: adaptively regulating the voltage based on the energy spectrum measured from an X-ray source, so as to prevent any deviation in the voltage from a reference level and maintaining a voltage substantially constant at the reference level by repeating steps of measuring the energy spectrum of the X-rays generated by an X-ray source during subsequent CT number measurements by the CT system as claimed.

Claim 11 is allowed because prior art fails to disclose or make obvious a method of stabilizing the measurement of CT numbers by a CT system, the method comprising: generating and providing a voltage control signal to maintain a voltage substantially constant at a reference level, thereby substantially reducing in the CT system a variation in the calculated values of CT numbers; wherein the voltage control signal is proportional to a known function of a principal detector generated first and by an auxiliary detector including a relatively low energy absorber generated second intensity magnitudes as claimed.

Claims 12-16 are allowed because prior art fails to disclose or make obvious a A CT system, comprising: a feedback controller for providing to a voltage source a voltage control signal; wherein an energy spectrum measured by a kv meter is used to adjust a voltage control signal so as to maintain the voltage substantially constant at a reference level established during calibration, and wherein a reference level is the voltage level at which calculation by said CT system of the CT number of a sample having a known CT number value yields the correct known CT number value as claimed.

Claim 17 are allowed because prior art fails to disclose or make obvious a CT system for performing stabilized CT number measurements, comprising: a feedback controller for providing to a voltage source a voltage control signal; wherein the voltage control signal is adjusted as a function of a ratio of a principal detector generated first and by an auxiliary detector including a relatively low energy absorber generated second intensity magnitudes to maintain said voltage substantially constant at a

reference level established during calibration, thereby substantially reducing in the CT system a variation in the measured values of CT numbers as claimed.

Claim 18 is allowed because prior art fails to disclose or make obvious an apparatus for stabilizing CT number calculations by a CT comprising: a feedback controller for providing to a voltage source a voltage control signal based on a measured x-ray spectrum so that the voltage can be adjusted in response to a control signal so as to maintain the voltage constant at a reference level, thereby substantially reducing a variation in the calculated values of the CT number of a target object as claimed.

Claims 19 and 20 are allowed because prior art fails to disclose or make obvious an apparatus for stabilizing CT number calculations in a CT system comprising: a feedback controller for providing to a voltage source a voltage control signal; wherein the voltage control signal is adaptively adjusted, based on a predetermined function of a principal detector generated first and by an auxiliary detector including a relatively low energy absorber generated second intensity magnitudes to maintain the voltage substantially constant at a reference level for which the calculation by the CT system of the CT number of a sample having a known CT number value yields the correct known CT number value as claimed as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***


5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yokouchi et al. (US Patent 5,022,063) and Siedband (US Patent 4,361,900) disclose voltage regulated the X-ray sources power supplies. Lambert et al. (US Patent 4,105,922) discloses CT number identifier in a CT system.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irakli Kiknadze whose telephone number is (703) 305-6464. The examiner can normally be reached on M-F(8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (703) 308-4858. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Irakli Kiknadze  
December 12, 2003  
IK

  
DAVID V. BRUCE  
PRIMARY EXAMINER